

# Service Quality Measurements

## Executive Overview

### Collocation Provisioning (CP)

Function:	
Timeliness of Collocation Provisioning	
Business Implications:	
<ul style="list-style-type: none"> <li>Timely responses about the availability and price of collocation space or alternatives where space is not available or high priced is critical for CLEC financial planning on expansions beyond the calling areas of its switches.</li> <li>Timely provisioning of collocation arrangements enables CLECs to keep to business plans for entering new service areas.</li> </ul>	
Measurements:	Results Detail:
<ul style="list-style-type: none"> <li>Mean Time To Respond to Collocation Request</li> <li>Mean Time To Provide Collocation Arrangement</li> <li>% Due Dates Missed</li> </ul>	<ul style="list-style-type: none"> <li>Company</li> <li>Collocation Type</li> <li>Geographic Scope</li> </ul>

# Service Quality Measurements

## Executive Overview

### Database Updates (DU)

Function:	
Database Update Timelines and Accuracy	
Business Implications	
<ul style="list-style-type: none"><li>• Timely and accurate database updates are critical to customers receiving prompt emergency assistance at correct locations when they dial 911; customers and friends obtaining correct dialing information from operators or telephone directories; and callers seeking correct information about acceptance of collect or third-party-billed calls.</li><li>• Timely and accurate loading of CLECs' NXXs enable proper completion and billing of all calls, on-time launch of new facilities-based service, and proper emergency routing of calls for emergency assistance.</li></ul>	
Measurements:	Results Detail:
<ul style="list-style-type: none"><li>• Average Update Interval</li><li>• % Update Accuracy</li></ul>	<ul style="list-style-type: none"><li>• Company</li><li>• Database Type</li></ul>

# Service Quality Measurements

## Executive Overview

### Interconnect / Unbundled Elements and Combos (IUE)

Function:	
<b>Availability of Network Elements</b>	
<b>Business Implications</b>	
<ul style="list-style-type: none"> <li>Because CLECs use individual elements as well as element combinations to deliver unique services, it is essential that the UNE functionality operate properly due to the crucial role played by such elements in providing quality retail services.</li> <li>This measure monitors individual network element or element combinations, that do not have an apparent retail analog, to assure that CLECs have a meaningful opportunity to compete through access to and use of an element (or combinations) functionality.</li> </ul>	
Measurements:	Results Detail:
<ul style="list-style-type: none"> <li>Function Availability</li> </ul>	<ul style="list-style-type: none"> <li>By Unique UNE or UNE Combination Requested by CLEC</li> </ul>

Function:	
<b>Performance of Network Elements</b>	
<b>Business Implications:</b>	
<ul style="list-style-type: none"> <li>As CLECs use individual elements (as well as element combinations) to deliver unique services, it is essential that the UNE functionality operates in a timely manner because of the crucial role played by such elements in providing quality retail services</li> </ul>	
Measurements:	Results Detail:
<ul style="list-style-type: none"> <li>Timeliness of Element Performance</li> </ul>	<ul style="list-style-type: none"> <li>By Unique UNE or UNE Combination employed (e.g. LIDB Query time out)</li> </ul>

# Service Quality Measurements

## Formula Quick Reference

### Formula Quick Reference Guide

Measurement Designation:	Measurement Name:	Measurement Formula:
<b>Ordering and Provisioning (OP)</b>		
<b>OP-1</b>	<b>Average Completion Interval</b>	Average Completion Interval = $\Sigma [(\text{Completion Date \& Time}) - (\text{Order Submission Date \& Time})] / (\text{Count of Orders Completed in Reporting Period})$
<b>OP-2</b>	<b>% Orders Completed on Time</b>	% Orders Completed on Time = $(\text{Count of Orders Completed within ILEC Committed Due Date}) / (\text{Count of Orders Completed in Reporting Period}) \times 100$
<b>OP-3</b>	<b>Average Offered Interval</b>	Average Offered Interval = $\Sigma [(\text{Committed Due Date \& Time}) - (\text{Date \& Time of Receipt of valid Service Request})] / (\text{Number of Committed Due Dates})$
<b>OP-4</b>	<b>% Order Accuracy</b>	% Order Accuracy = $(\Sigma \text{Orders Completed w/o Error}) / (\Sigma \text{Orders Completed}) \times 100$
<b>OP-5</b>	<b>% Mechanized Order Flow Through</b>	% Mechanized Order Flow Through = $[(\text{Total Number of Orders Processed Without Manual Intervention}) / (\text{Total Number of Orders Completed})] \times 100$
<b>OP-6</b>	<b>% Orders Rejected</b>	% Orders Rejected = $[\text{Number of Orders Rejected Due to Error or Omission} / \text{Number of Orders Received by ILEC During Reporting Period}] \times 100$
<b>OP-7</b>	<b>Average Submissions Per Order</b>	Average Submissions Per Order = $\Sigma [(\text{Number of Firm Order Confirmations}) + (\text{Number of Rejections Issued})] / (\text{Number of Firm Order Confirmations})$
<b>OP-8</b>	<b>Reject Interval</b>	Reject Interval = $\Sigma [(\text{Date and Time of Order Rejection}) - (\text{Date and Time of Order Receipt or Acknowledgment})] / (\text{Number of Orders Rejected in Reporting Period})$
<b>OP-9</b>	<b>FOC Interval</b>	FOC Interval = $\Sigma [(\text{Date and Time of Firm Order Confirmation}) - (\text{Date and Time of Order Acknowledgment})] / (\text{Number of Orders Confirmed in Reporting Period})$
<b>OP-10</b>	<b>Jeopardy Interval</b>	Jeopardy Interval = $\Sigma [(\text{Date and Time of Committed Due Date for the Order}) - (\text{Date and Time of Jeopardy Notice})] / (\text{Number of Orders Jeopardized in Reporting Period})$ . For all orders jeopardized on or before the scheduled due date.
<b>OP-11</b>	<b>Completion Notice Interval</b>	Completion Notice Interval = $\Sigma [(\text{Date and Time of Notice of Completion Issued to the CLEC}) - (\text{Date and Time of Work Completion by ILEC})] / (\text{Number of Orders Completed in Reporting Period})$
<b>OP-12</b>	<b>% Completions/Attempts without Notice or with Less Than 24 Hours Notice.</b>	% Completions/Attempts without Notice or with Less Than 24 Hours Notice = $[\text{Completion Dispatches (Successful and Unsuccessful) With No FOC or FOC Received Within 24 Hours of Due Date} / \text{All Completions}] \times 100$

## Service Quality Measurements

### Formula Quick Reference

Measurement Designation:	Measurement Name:	Measurement Formula:
<b>OP-13</b>	<b>% Jeopardies</b>	$\% \text{ Jeopardies} = (\text{Number of Orders Jeopardized in Reporting Period}) / (\text{Number of Orders Confirmed in Reporting Period})$
<b>OP-14</b>	<b>Average Coordinated Conversion Interval</b>	$\text{Average Coordinated Conversion Interval} = \Sigma [(\text{Date \& Time Re-termination is Completed by ILEC}) - (\text{Date and Time of Initial Service Interruption (disconnect of facilities and translations for customer transferring service)}) / (\text{All Customer Conversions Completed During Reporting Period})] \times 100$
<b>OP-15</b>	<b>% Service Loss from Early Cuts</b>	$\% \text{ Service Loss from Early Cuts} = (\text{Customer Conversion Where Cutover Time is Earlier Than Due Date and Time}) / (\text{All Customer Conversions Completed During Reporting Period}) \times 100$
<b>OP-16</b>	<b>% Service Loss from Late Cuts</b>	$\% \text{ Service Loss from Late Cuts} = (\text{Customer Conversion Where Cutover Time Is More Than 30 Minutes Past Due Date and Time}) / (\text{All Customer Conversion Completed During Reporting Period}) \times 100$
<b>OP-17</b>	<b>Held Order Interval</b>	$\text{Held Order Interval} = \Sigma (\text{Reporting Period Close Date} - \text{Committed Order Due Date}) / (\text{Number of Orders Pending and Past The Committed Due Date})$ for all orders pending and past the committed due date
<b>OP-18</b>	<b>% Orders Held <math>\geq</math> 90 Days</b>	$\% \text{ Orders Held } \geq 90 \text{ Days} = (\# \text{ of Orders Held for } \geq 90 \text{ days}) / (\text{Total } \# \text{ of Orders Pending But Not Completed}) \times 100$
<b>OP-19</b>	<b>% Orders Held <math>\geq</math> 15 Days</b>	$\% \text{ Orders Held } \geq 15 \text{ Days} = (\# \text{ of Orders Held for } \geq 15 \text{ days}) / (\text{Total } \# \text{ of Orders Pending But Not Completed}) \times 100$
<b>Maintenance and Repair (MR)</b>		
<b>MR-1</b>	<b>Mean Time to Restore</b>	$\text{Mean Time To Restore} = \Sigma [(\text{Date and Time of Trouble Ticket Resolution Returned to CLEC}) - (\text{Date and Time Trouble Ticket Referred to ILEC})] / (\text{Count of Trouble Tickets Resolved in Reporting Period})$
<b>MR-2</b>	<b>Mean Jeopardy Interval for Maintenance and Trouble Handling</b>	$\text{Mean Jeopardy Interval for Maintenance and Trouble Handling} = \Sigma [(\text{Date and Time of Committed Due Date for Maintenance or Trouble Handling}) - (\text{Date and Time of Jeopardy Notice})] / (\text{Number of Maintenance or Trouble Handling Appointments Jeopardized in Reporting Period})$
<b>MR-3</b>	<b>Repeat Trouble Rate</b>	$\text{Repeat Trouble Rate} = (\text{Count of Trouble Reports Where More Than One Trouble Report Was Logged for the Same Service Access Line Within a Continuous 30 Day Period}) / (\text{Number of Reports in the Report Period}) \times 100$
<b>MR-4</b>	<b>Trouble Rate</b>	$\text{Trouble Rate} = (\text{Count of Initial \& Repeated Trouble Reports in the Current Period}) / (\text{Number of Service Access Line in Service at End of the Report Period}) \times 100$

## Service Quality Measurements

### Formula Quick Reference

Measurement Designation:	Measurement Name:	Measurement Formula:
<b>MR-5</b>	<b>% Troubles Within 30 Days of Install and Other Order Activity</b>	% Troubles Within 30 Days of Install and Other Order Activity = (Total Number of Trouble Tickets Associated With Lines That Had Service Order Activity Within 30 Days of the Trouble Report)/(Total Number of Orders Completed in the Report Period)
<b>MR-6</b>	<b>% Customer Troubles Resolved Within Estimate</b>	% Customer Troubles Resolved Within Estimate = (Count of Customer Troubles Resolved By The Quoted Resolution Time and Date) / (Count of Customer Troubles Tickets Closed) x 100
<b>General (GE)</b>		
<b>GE-1</b>	<b>% System Availability</b>	% System Availability = [(Hours Functionality is Available to CLECs During Report Period) / (Number of Hours Functionality was Scheduled to be Available During the Period)] x 100
<b>GE-2</b>	<b>Mean Time to Answer Calls</b>	Mean Time to Answer Calls = $\Sigma$ [(Date and Time of Call Answer) - (Date and Time of Call Receipt)] / (Total Calls Answered by Center)
<b>GE-3</b>	<b>Call Abandonment Rate</b>	Call Abandonment Rate = (Count of Calls Terminated Before Answer During the Reporting Period) / (Count of All Calls Placed in Queue During the Reporting Period)
<b>GE-4</b>	<b>Average Response Interval</b>	Average Response Interval = $\Sigma$ [(Query Response Date & Time) - (Query Submission Date & Time)] / (Number of Queries Submitted in Reporting Period)
<b>Billing (BI)</b>		
<b>BI-1</b>	<b>Mean Time to Provide Recorded Usage Records</b>	Mean Time to Provide Recorded Usage Records = $\{ \Sigma [(Data Set Transmission Date) - (Date of Message Recording)] \} / (Count of All Messages Transmitted in Reporting Period)$
<b>BI-2</b>	<b>Mean Time to Deliver Invoices</b>	Mean Time to Deliver Invoices = $\Sigma [(Invoice Transmission Date) - (Date of Scheduled Bill Cycle Close)] / (Count of Invoices Transmitted in Reporting Period)$
<b>BI-3</b>	<b>% Invoice Accuracy</b>	% Invoice Accuracy = [(Number of Invoices Delivered in the Reporting Period that Have Complete Information, Reflect Accurate Calculations and are Properly Formatted) / Total Number of Invoices Issued in the Reporting Period] x 100
<b>BI-4</b>	<b>% Usage Accuracy</b>	% Usage Accuracy = [(Number of Usage Records Delivered in the Reporting Period That Reflected Complete Information Content and Proper Formatting) / (Total Number of Usage Records Transmitted)] x 100
<b>Operator Services/Directory Assistance &amp; Listings (OS, DA and DL)</b>		
<b>OS/DA-1</b>	<b>Mean Time To Answer</b>	Mean Time To Answer = $\Sigma$ [(Date and Time of Call Answer) - (Date and Time of Call Receipt)] / (Total Calls Answered on Behalf of CLECs in Reporting Period)

# Service Quality Measurements

## Formula Quick Reference

Measurement Designation:	Measurement Name:	Measurement Formula:
<b>DL-1</b>	<b>Average Time Allotted To Proof Listing Updates Before Publication</b>	Average Time Allotted To Proof Listing Updates Before Publication = $\Sigma[(\text{Date \& Time of Directory Publication Deadline}) - (\text{Date and Time Updates Available for Proofing})] / \text{Number of Updates Sent for Proofing}$
<b>Network Performance (NP)</b>		
<b>NP-1</b>	<b>% Call Completion</b>	% Call Completion = $[(\text{Total number of blocked call attempts during busy hour}) / (\text{Total number of call attempts during busy hour})] \times 100$ . (inbound and outbound call attempts would be measured separately)
<b>NP-2</b>	<b>Meantime To Notify CLEC</b>	Meantime To Notify CLEC = $\Sigma[(\text{Date and Time ILEC Notified CLEC}) - (\text{Date and Time ILEC detected network incident})] / \text{Count of Network Incidents}$
<b>NP-3</b>	<b>Network Performance Parameters</b>	Network Performance Parameters = $\Sigma(\text{Network Performance Parameter Result}) / (\text{Number of Tests Conducted})$
<b>Collocation Provisioning (CP)</b>		
<b>CP-1</b>	<b>Meantime To Respond To Collocation Request</b>	Meantime To Respond To Collocation = $\Sigma [(\text{Request Response Date}) - (\text{Request Submission Date})] / \text{Count of Request Responses Issued}$
<b>CP-2</b>	<b>Meantime To Provide Collocation Arrangement</b>	Meantime To Provide Collocation Arrangement Request = $\Sigma [(\text{Date \& Time Collocation Arrangement is Complete}) - (\text{Date \& Time Collocation application submitted})] / \text{Number of Collocation Arrangements Complete}$
<b>CP-3</b>	<b>% Due Dates Missed</b>	% Due Dates Missed = $(\text{Number of Orders Not Completed By ILEC Committed Due Date}) / \text{Total Number of Orders Completed During the Reporting Period}$
<b>Database Updates (DU)</b>		
<b>DU-1</b>	<b>Average Update Interval</b>	Average Update Interval = $\Sigma [(\text{Completion Date \& Time of Database Update}) - (\text{Submission Date and Time of Database Change})] / \text{Total Number of Updates Completed During Reporting Period}$
<b>DU-2</b>	<b>% Update Accuracy</b>	% Update Accuracy = $[\text{Number of Updates Completed Without Error}] / (\text{Number Updates Completed}) \times 1001$
<b>Interconnect / Unbundled Elements and Combos (IUE)</b>		
<b>IUE-1</b>	<b>Function Availability</b>	<p>Function Availability<sup>1</sup> = <math>(\text{Amount of Time}^2 \text{ a Functionality is Useable}^1 \text{ by a CLEC in a Specified Period}) / (\text{Total Time}^2 \text{ Functionality Was Intended to Be Useable})</math></p> <p>Notes:</p> <ol style="list-style-type: none"> <li>1. These measures may also be expressed in the negative, that is, in term of unavailability.</li> <li>2. In some instances, rather than time, the availability will be expressed in terms of transactions executed successfully compared to transactions attempted.</li> </ol>

## Service Quality Measurements

### Formula Quick Reference

Measurement Designation:	Measurement Name:	Measurement Formula:
IUE-2	Timeliness of Element Performance	$\text{Timeliness of Element Performance} = \frac{\text{Number of Times Functionality Executes Successfully Within the Established Timeliness Standard}}{\text{Number of Times Execution of Functionality was Attempted}}$



# Service Quality Measurements

## Measurement Detail

### **Measurement Detail:**

- Highlights the business implications of each measurement function
- Details the measurement methodology, analogous retail functions, reporting dimensions, and objective performance standard in the absence of ILEC retail performance results

# Service Quality Measurements

## Measurement Detail

### Pre-Ordering (PO)

The content of this section has been moved to the “General” section.

### Ordering and Provisioning (OP)

<b>Function:</b> <b>Business Implications:</b>	<b>Order Completion Intervals</b>  <p>In order to be successful in the marketplace, CLECs must be capable of delivering service in time frames equal to or better than the ILEC delivers for comparable service configurations and activities. Likewise, CLECs’ customers will be dissatisfied if requested services or features are not delivered when promised. The “average completion interval” measure monitors the time required by the ILEC to deliver integrated and operable service components requested by the CLEC, regardless of whether service resale, unbundled network elements or interconnection service delivery methods are employed. When the service delivery interval of the ILEC is measured for comparable services, a conclusion can be drawn regarding whether or not CLECs have a reasonable opportunity to compete for customers. Timely provisioning of interconnect trunks and inbound augments by the ILEC can prevent customer harm from call blocking before the problem occurs.</p> <p>The “orders completed on time” measure monitors the reliability of ILEC commitments with respect to committed due dates to assure that CLECs can reliably quote expected due dates to their retail customers. In addition, when monitored over time, the “average completion interval” and “percent completed on time” may prove useful in detecting developing capacity issues. The “average offered interval” indicates whether both ILEC and CLEC have the same scheduling opportunities for service delivery. The measure also shows non-parity if the ILEC’s offered intervals match more closely the completion intervals for its customers than do the ILEC’s offered and completion intervals for CLEC customers. CLECs need to honor their offered intervals to retain customers.</p> <p>Timely delivery of interconnect trunks and augments based on CLEC traffic projections rather than current utilization is a significant capacity parity issue. Because of the ILEC’s more extensive network and greater use of DEOTs (direct end office trunks), ILECs typically do not need to augment their own trunks until utilization reaches 85%. A CLEC, however, is very likely to see its 50% utilization rate jump to 100% with the addition of one or two large customers. An ILEC should not deny the CLEC’s request for inbound interconnect trunk augments when the CLEC’s current utilization level does not match the percentage level at which the ILEC augments its own trunks. The ILEC’s network should meet the CLEC’s forecasted or otherwise formally communicated business needs for augment trunks and DS3 trunks (which must be in place before local tandem trunks and DEOT orders are placed).</p>
<b>Measurement Methodology:</b>	<p><b>Average Completion Interval</b> = <math>\Sigma  (\text{Completion Date \&amp; Time}) - (\text{Order Submission Date \&amp; Time})  / (\text{Count of Orders Completed in Reporting Period})</math></p> <p><b>% Orders Completed on Time</b> = <math>(\text{Count of Orders Completed within ILEC Committed Due Date}) / (\text{Count of Orders Completed in Reporting Period}) \times 100</math></p>

# Service Quality Measurements

## Measurement Detail

**Average Offered Interval = [(Date & Time Due Date) – (Date & Time of Receipt of Service Request)]/(Number of Committed Due Dates)**

**For CLEC Results:** The actual completion interval is determined for each order processed during the reporting period. The completion interval is the elapsed time from the ILEC receipt of a syntactically correct order from the CLEC to the ILEC's return of a valid completion notification to the CLEC. Elapsed time for each order is accumulated for each reporting dimension (see below). The accumulated time for each reporting dimension then is divided by the associated total number of orders completed within the reporting period.

The percentage of orders completed on time is determined by first counting, for each specified reporting dimension, both the total numbers of orders completed within the reporting interval and the number of orders completed by the committed due date (as specified on the initial FOC returned to the CLEC). For each reporting dimension, the resulting count of orders completed no later than the committed due date is divided by the total number of orders completed with the resulting fraction expressed as a percentage.

Although CLEC forecasts are not technically "orders", the CLEC forecast provides the ILEC with the information it needs to be able to augment its inbound trunks (and other ILEC trunks needed for efficient interconnection) in a timely manner to handle the forecasted CLEC calling volume. To calculate ILEC trunk augments as a percentage of "orders" completed on time, the due date is the date on which the additional trunk is needed by the CLEC, as stated in the forecast. The total number of ILEC augments completed no later than the due date is divided by the total number of ILEC augments completed in the reporting period. The resulting fraction is expressed as a percentage.

The offered interval is the due date that an ILEC provides the CLEC on a firm order confirmation (i.e. the earliest date on which the CLEC's customer can obtain service without paying for an escalation).

**For ILEC Results:** Same as for CLEC with the clarifications noted below.

### Other Clarifications and Qualification:

- The elapsed time for an ILEC order is measured from the point in time when the ILEC customer service agent enters the order into the ILEC order processing system until the date and time that the ILEC personnel log actual completion of all work necessary to permit service initiation, whether or not the ILEC initiates customer billing at that point in time.
- Results for the CLECs are captured and retained at the order level (e.g., unique PON).
- The Completion Date and Time is the date upon which the ILEC issues the Order Completion Notice to the CLEC.
- If the CLEC initiates a supplement to the originally submitted order and the supplement reflects changes in customer requirements (rather than responding to ILEC initiated changes), then the order submission date and time will be the date and time of the ILEC receipt of a syntactically correct order supplement.
- No other supplemental order activities will result in an update to the order submission date and time used for the purposes of computing the order completion interval.

# Service Quality Measurements

## Measurement Detail

<ul style="list-style-type: none"> <li>• See "Order Status" measurement detail for a discussion of ILEC analogs, receipt of a syntactically correct order and return of a valid completion notice.</li> <li>• Elapsed time is measured in hours and hundredths of hours rounded to the nearest hundredth of an hour.</li> <li>• The accumulation of elapsed time continues through off-schedule, weekends and holidays.</li> </ul>	
<b>Reporting Dimensions:</b>	<b>Excluded Situations:</b>
<ul style="list-style-type: none"> <li>• Company</li> <li>• Service (See Appendix A)</li> <li>• Activity (See Appendix A)</li> <li>• Geographic Scope</li> <li>• Volume Category</li> </ul>	<ul style="list-style-type: none"> <li>• Canceled orders</li> <li>• ILEC Orders associated with internal or administrative use of local services</li> <li>• Orders where CLEC has selected a longer due date than requested.</li> </ul>
<b>Data Retained Relating To CLEC Experience:</b>	<b>Data Retained Relating To ILEC Performance:</b>
<ul style="list-style-type: none"> <li>• Report Month</li> <li>• CLEC Order Number</li> <li>• Order Submission Date</li> <li>• Order Submission Time</li> <li>• Order Completion Date</li> <li>• Order Completion Time</li> <li>• Service Type</li> <li>• Activity Type</li> <li>• Geographic Scope</li> </ul>	<ul style="list-style-type: none"> <li>• Report Month</li> <li>• Average Order Completion Interval</li> <li>• Standard Error for the Order Completion Interval</li> <li>• Count of Orders Completed</li> <li>• Count of Orders Completed by the Due Date</li> <li>• Average Offered Interval</li> <li>• Service Type</li> <li>• Activity Type</li> <li>• Geographic Scope</li> <li>• Volume Category</li> </ul>
<b>Performance Standard in Absence of ILEC Results:</b>	<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:</p> <ul style="list-style-type: none"> <li>• Unless otherwise noted, the order completion interval for installations that do not require a premise visit and do not require anything beyond software updates is 1 business day.</li> <li>• Unless otherwise noted, the order completion intervals for installations that involve a premise visit or physical work is three business days.</li> <li>• Installation Interval Exceptions: <ul style="list-style-type: none"> <li>• UNE Platform (at least DS0 loop + local switching + common transport elements) installation interval is 1 business day whether or not premise work is required.</li> <li>• The installation interval for unbundled loops is always 1 business day.</li> <li>• UNE Channelized DS1 (DS1 unbundled loop + multiplexing) installation interval is within 2 business days.</li> <li>• Unbundled Switching Element installation interval is within 2 business days</li> <li>• DS0/DS1 Dedicated Transport installation interval is within 3 business days (See Network Performance measurement detail for related standards on interconnect trunks and augment inbound trunk provisioning thresholds)</li> <li>• The installation interval for All Other Dedicated Transport is within 5 business days.</li> <li>• Access DS3s used for local interconnects within 10 days.</li> </ul> </li> </ul>

# Service Quality Measurements

## Measurement Detail

- The installation interval for all orders involving only feature modification is 5 hours.
- Order completion interval for all disconnection orders is 1 business day.

Interconnect Augment Trunks: ILECs must meet relevant tariff, service level agreement or contract intervals for T-1s/DSOs and DS1 provisioning 98% of the time

Although CLECs do not order them per se, ILECs must also provide inbound trunk augments in line with CLEC capacity projections. CLECs require these augments at utilization thresholds that are lower than the ILEC's own thresholds to reflect the differences in network size and the impact of growth in CLEC customer numbers on inbound as well as outbound capacity needs. The threshold below for augment trunk provisioning will afford CLECs a reasonable opportunity to compete. Individual CLECs may agree to different thresholds in negotiation with ILECs on inbound trunk augments:

- DEOTS REPRESENT LESS THAN 50% OF COMBINED INBOUND/ OUTBOUND CAPACITY – augment trunk orders must be provided when utilization reaches 60% on the Erlang-B.01 scale.
- DEOTS REPRESENT MORE THAN 50% OF TOTAL CAPACITY – augment trunk orders may be placed when utilization is at 75% on the Erlang-B.01 scale.

### Function: Business Implications

#### Order Processing Quality

Customers expect that their service provider will deliver precisely the service ordered and all the features specified. A service provider that is unreliable in fulfilling orders, will not only generate ill-will with customers when errors are made, but will also incur higher costs to rework orders and to process customer complaints. This measurement monitors the accuracy of the provisioning work performed by the ILEC, in response to CLEC orders. When the ILEC provides the comparable measure for its own operation, it is possible to know if provisioning work performed for CLECs is at least as accurate as that performed by the ILEC for its own retail local service operations.

Many of the order transactions between ILEC and CLEC are designed to be entirely automated. For these transactions, any "fall out" from the mechanized process will result in a higher likelihood of delay or inaccurate processing. The availability of flow through order entry without manual intervention on the ILEC's part decreases the occurrence of rekeying errors and makes the CLEC more accountable for its order quality. Measurements are needed (1) to monitor the extent to which human intervention is required for CLEC automated order transactions and (2) to compare the results to ILEC order processing flow through. CLECs must be assured that their orders have the same opportunity as the ILEC's orders for timely and accurate processing.

Sometimes CLECs receive order rejections and must resubmit orders for failures on the part of the ILECs' systems or lack of notice or training on changed formats and processes for order entry. Sometimes orders are rejected with no explanation or delayed for invalid queries by the ILECs. Often ILEC electronic editing systems reject an order one error at a time, rather than capture all the issues with the order on one submission. These rejections and resubmissions not only are burdensome to CLECs but delay service delivery to the customer.

# Service Quality Measurements

## Measurement Detail

### Measurement Methodology:

**% Order Accuracy** =  $(\Sigma \text{ Orders Completed w/o Error} / (\Sigma \text{ Orders Completed}) \times 100$

**% Mechanized Order Flow Through** =  $[(\text{Total Number of Orders Processed Without Manual Intervention}) / (\text{Total Number of Orders Completed})] \times 100$

**% Orders Rejected** =  $[\text{Number of Orders Rejected Due to Error or Omission} / \text{Number of Orders Received by ILEC During Reporting Period}] \times 100$

**Average Submissions Per Order** =  $\Sigma[(\text{Number of Firm Order Confirmations}) + (\text{Number of Rejections Issued})] / (\text{Number of Firm Order Confirmations})$

#### For CLEC Results:

##### Order Accuracy:

For each order completed during the reporting period, the original account profile and the order that the CLEC sent to the ILEC are compared to the services and features reflected upon the account profile as it existed following completion of the order by the ILEC. An order is "completed without error" if all service attribute and account detail changes (as determined by comparing the original and the post order completion account profile) completely and accurately reflect the activity specified on the original and any supplemental CLEC orders. "Total number of orders completed" refers to the total number of order completion notices sent to the CLEC by the ILEC for each reporting dimension identified below.

##### % Mechanized Order Flow Through:

"Percentage Mechanized Order Flow Through" identifies the total orders processed from acceptance of the ILEC gateway to the ILEC service order processor and other legacy systems without manual intervention. For each type of order, the count includes orders that arrive at the destination work group(s) without human intervention from initial order creation by the customer contact agent until the time the order is delivered to the appropriate work group responsible for physical work. The resulting count is divided by the total number of orders (of the same type) that were processed during the reporting period with the result expressed as a percentage.

##### % Orders Rejected:

The percentage of orders rejected is the count of (1) order submissions where the ILEC returns a notice of a syntax rejection to the CLEC and (2) order submissions where the ILEC returns a notice that the CLEC order was rejected by legacy system edits. The resulting combined count of rejections is divided by the count of orders submitted (For EDI interfaces, the orders submitted would be the combined count of positive and negative 997 messages issued upon receipt of the CLEC order.)

##### Average Number of Submissions Per Order:

The "average number of submissions per order" is derived by adding the number of Firm Order Confirmations sent to the CLEC during the reporting period and the number of rejects issued to the CLEC during the reporting period. This sum is then divided by the number of Firm Order Confirmations to determine the average number of submissions per order for the CLEC.

**For ILEC Results:** Same computation as for the CLEC with the clarifications noted below.

# Service Quality Measurements

## Measurement Detail

<b>Other Clarifications and Qualification:</b> <ul style="list-style-type: none"> <li>• <b>Order Supplements</b> - If the CLEC initiates any supplements to the originally submitted order, for the purposes of reflecting changes in customer requirements, then the cumulative effect of the initial order and all the supplemental orders will be compared. Differences will be determined by comparing the pre- and post-order completion account profiles for the affected customer.</li> <li>• <b>Completion Notices</b> - To the extent that the ILEC supplies a completion notice containing sufficient information to perform validation of the order accuracy, then the Completion Notice information can be utilized in lieu of the comparison of the “before” and “after” account profiles. Use of the completion notice for this purpose would need to be at the mutual agreement of the ILEC and the CLEC.</li> <li>• <b>All Orders</b> - The comparison is between the CLEC order and the account profile as it existed before and after order completion.</li> <li>• <b>Service Profile</b> - If a sample is employed for this measurement, then the ILEC should also be prepared, if requested, to demonstrate that the order activity types represented within each service type for both the ILEC and CLEC sample are representative of actual experiences for each entity.</li> <li>• <b>Sampling</b> may be utilized to establish order accuracy provided the results produced are consistent with the reporting dimensions specified, the sample methodology is disclosed in advance and reflects generally accepted sampling methodology and the sampling process may be audited by the CLEC.</li> </ul>	
<b>Reporting Dimensions:</b> <ul style="list-style-type: none"> <li>• Company</li> <li>• Interface Type</li> <li>• Service Type (See Appendix A)</li> <li>• Order Activity (See Appendix A)</li> <li>• Volume Category</li> </ul>	<b>Excluded Situations:</b> <ul style="list-style-type: none"> <li>• Orders canceled by the CLEC</li> <li>• Order Activities of the ILEC associated with internal or administrative use of local services.</li> <li>• For resubmissions impact on due date measure, ILEC would not have to comply if tying final accepted order to original order is technically infeasible (But feasibility issue will be revised as systems are upgraded.)</li> </ul>
<b>Data Retained Relating To CLEC Experience:</b> <ul style="list-style-type: none"> <li>• Report Month</li> <li>• Count of Orders Completed Without Manual Intervention</li> <li>• Count of Firm Order Confirmations</li> <li>• Count of Syntax Rejects</li> <li>• Count of Legacy System Rejects</li> <li>• Count of Orders Submitted</li> <li>• Interface Type</li> <li>• Order Activity Type</li> <li>• Original order date for rejected orders</li> <li>• Rejection Notice Date and Time</li> <li>• Service Type</li> <li>• Volume Category</li> <li>• Manual Fallout (for Mechanized Orders Only)</li> </ul>	<b>Data Retained Relating To ILEC Performance:</b> <ul style="list-style-type: none"> <li>• Report Month</li> <li>• Count Orders Completed Without Manual Intervention</li> <li>• Count of Order Confirmations</li> <li>• Count of Syntax Rejects</li> <li>• Count of Legacy System Reject</li> <li>• Count of Orders Submitted</li> <li>• Interface Type</li> <li>• Order Activity</li> <li>• Service Type</li> <li>• Volume Category</li> </ul>

# Service Quality Measurements

## Measurement Detail

<b>Performance Standard in Absence of ILEC Results:</b>	<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete.</p> <ul style="list-style-type: none"> <li>Completed CLEC orders, by reporting dimension, are accurate no less than 99% of the time.</li> <li>Mechanized flow through of orders occurs at least 98% of the time.</li> <li></li> </ul>
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<b>Function: Business Implications:</b>	<p><b>Order Status</b></p> <p>When customers call their service providers, they expect prompt answers regarding the progress on their orders. Likewise, when changes must be made, such as to the expected delivery date, customers expect that they will be immediately notified so that they may modify their own plans. A service provider that cannot fulfill such expectations will generate customer dissatisfaction. Lengthy delays in exchange of status information will result in the delay of other customer affecting activities. For example, inside wiring activity often is initiated after the firm order confirmation is returned, and customer billing must await CLEC receipt of the order completion notice. The order status measurements monitor, when compared to the ILEC result, whether the CLEC has timely access to order progress information so that the customer may be updated or notified promptly when changes and rescheduling are necessary.</p> <p>The “% jeopardies returned” measure for the CLEC, when reported in comparison to the ILEC result, will gauge whether initial commitments to the CLEC for order processing are at least as reliable as the commitments the ILEC makes for its own operations.</p> <p>CLECs also need adequate notice of order completion activities. They can be made to look disorganized by ILECs providing service without such advance notice: Customers and CLECs may even be unable to schedule necessary vendors on the scene to complete the installation, resulting in ILEC technicians being turned away and customer frustration with the CLEC. An ILEC could cause a great deal of harm to the CLEC competitively, yet look like it is providing parity or above parity service by the results other provisioning measures. A measurement capturing any non-parity in the occurrence of surprise or short-notice service deliveries also is critical to affording CLECs a reasonable opportunity to compete.</p>
<b>Measurement Methodology</b>	<p>Order status intervals measure the elapsed time necessary to provide a notice to the CLEC that specific events have occurred or particular conditions have been encountered when processing an order. Order status includes notification of order <u>rejection</u> due to violation of order content or syntax requirements, <u>confirmation</u> of order acceptance, <u>jeopardy</u> of an order due to the inability to complete work as originally committed and work <u>completion</u> notification. The interval associated with each of these four preceding major categories of status must be separately monitored and reported.</p> <p><b>Reject Interval = <math>\Sigma[(\text{Date and Time of Order Rejection}) - (\text{Date and Time of Order Receipt or Acknowledgment})]/(\text{Number of Orders Rejected in Reporting Period})</math></b></p>



# Service Quality Measurements

## Measurement Detail

**Reject Interval (syntax)** is the elapsed time between the ILEC receipt of an order from the CLEC to the ILEC return of a notice of a syntax rejection to the CLEC. The time measurement starts when the ILEC receives the order from the CLEC. The time measurement stops when the ILEC returns a rejection notice to the CLEC. The elapsed time is accumulated by order type with the resulting accumulated time then divided by the count of rejected orders associated with the particular order type.

**Reject Interval (legacy system)** is the elapsed time between the ILEC's acknowledgement /acceptance of an order from the CLEC to the ILEC's return of a rejection notice to the CLEC. The time measurement starts when the ILEC accepts or acknowledges the order from the CLEC as syntactically correct. The time measurement stops when the ILEC returns a rejection notice to the CLEC. The elapsed time is accumulated by order type with the resulting accumulated time then divided by the count of rejected orders associated with the particular service and order type.

**FOC Interval** =  $\Sigma[(\text{Date and Time of Firm Order Confirmation}) - (\text{Date and Time of Order Acknowledgment})] / (\text{Number of Orders Confirmed in Reporting Period})$

**Interval for Return of a Firm Order Confirmation (FOC Interval)** is the elapsed time between the ILEC acceptance of a syntactically correct order and the return of a confirmation to the CLEC that the order will be worked as submitted or worked with the modifications specified on the confirmation. The time measurement starts when the ILEC accepts (acknowledges) the order from the CLEC. The time measurement stops when the ILEC returns a valid firm order confirmation to the CLEC. The elapsed time is accumulated by order type with the resulting accumulated time then divided by the count of orders associated with the particular order type.

**Jeopardy Interval** =  $\Sigma[(\text{Date and Time of Committed Due Date for the Order}) - (\text{Date and Time of Jeopardy Notice})] / (\text{Number of Orders Jeopardized in Reporting Period})$ . For all orders jeopardized on or before the scheduled due date.

**Jeopardy Interval** is the remaining time between the pre-existing committed order completion date and time (communicated via the FOC) and the date and time the ILEC issues a notice to the CLEC indicating an order is in jeopardy of missing the due date. The scheduled order completion time will be assumed to be 5:00 p.m. local time unless other information is communicated in the FOC. The date and time of the jeopardy notice delivered by the ILEC is subtracted from the scheduled completion date to establish the jeopardy interval for any order placed in jeopardy before its scheduled due date. The jeopardy interval is accumulated by standard order activity with the resulting accumulated time then divided by the count of orders placed in jeopardy before the due date for each order activity.

**Completion Interval** =  $\Sigma[(\text{Date and Time of Notice of Completion Issued to the CLEC}) - (\text{Date and Time of Work Completion by ILEC})] / (\text{Number of Orders Completed in Reporting Period})$

**Completion Notice Interval** is the elapsed time between the ILEC technician's reported completion of physical work and the issuance of a valid completion notice to the CLEC. Where physical work is not required, such as in the case of software-only changes, the elapsed time will be measured beginning at 5:00 p.m. local time of the date for the committed completion and will end when the ILEC returns a valid completion notice to the CLEC. If a valid completion notice is returned before 5:00 p.m. on the committed completion date and no physical work is involved, then the

## Service Quality Measurements

### Measurement Detail

elapsed time will be recorded as 1/10 hour. The elapsed time is accumulated by order type with the resulting accumulated time then divided by the count of completion notices returned for each service and order type.

**% Completions or Attempts without Notice or with Less Than 24 Hours Notice.**  
**= [Completion Dispatches (Successful and Unsuccessful) With No FOC or FOC Received Within 24 Hours of Due Date/All Completions ] x 100**

Completion and Completion Attempts include any delivery of service (successful or not successful) for which the CLEC did not receive sufficient prior notification.

**For ILEC Results:** The ILEC reports completions for which ILEC technicians delivered service to customers without giving sufficient advance notice to customers, sales or to internal account team to arrange for appropriate vendors to be on hand. Calculation of insufficient notice is similar to CLEC calculation (none or less than 24 hours). Similar surprise service deliveries are calculated for ILEC affiliate's account representatives.

**For CLEC Results:** Calculation would exclude any successful or unsuccessful service delivery that CLEC was informed of at least 24 hours in advance. ILEC may also exclude from calculation deliveries on less than 24 hours' notice that CLEC requested.

**% Jeopardies = (Number of Orders Jeopardized in Reporting Period)/(Number of Orders Confirmed in Reporting Period)**

% Jeopardies is the percentage of total orders processed for which the ILEC notifies the CLEC that the work will not be completed as committed on the original FOC. The measurement result is derived by dividing the count of jeopardy notices the ILEC issues to the CLEC by the count of FOCs returned by the ILEC during the identical period. Both the "Number of Orders Jeopardized in Reporting Period" and "Number of Orders Confirmed in Reporting Period" are utilized in other status measurement computations and have identical meaning and derivation for this measurement.

**For ILEC Results:** Same computation as the CLEC with the clarifications outlined below

#### **Other Clarifications and Qualification:**

- When the ILEC processes orders for a CLEC via different interfaces (e.g., ASR and EDI) then the preceding measurement must be computed for each interface arrangement.
- All intervals are measured in hours and hundredths of hours rounded to the nearest hundredth.
- Because this should be a highly automated process, the accumulation of elapsed time continues through off-schedule, weekends and holidays.
- "Syntactically correct" means all fields required to process an order are populated and reflect the correct format as agreed and documented in the current interface specifications.
- The ILEC service agent's attempt to submit an order for processing by the ILEC OSS is considered equivalent to the ILEC acknowledgment of the CLEC's order.
- The ILEC OSS return of any indication to the service agent that an order cannot be processed as submitted is considered equivalent to the ILEC return of a rejection notice to the CLEC.

# Service Quality Measurements

## Measurement Detail

<ul style="list-style-type: none"> <li>• Return of any information (e.g., order recapitulation) to the ILEC customer service agent that indicates no errors are evident or that an order can be processed, is the equivalent of the ILEC return of a FOC to the CLEC.</li> <li>• Logging of information in the ILEC OSS, whether manual or automatic, that indicates an order may not be completed by the existing due date, is equivalent of the return of a jeopardy notice to the CLEC regardless of whether or not the ILEC takes action based upon such information.</li> <li>• Automatic logging of work completion and manual logging of work completion, whether input directly to the ILEC OSS or into an intermediate storage devise, is considered the equivalent of the return of a completion notice to the CLEC.</li> </ul>	
<b>Reporting Dimensions:</b>	<b>Excluded Situations:</b>
<ul style="list-style-type: none"> <li>• Standard Order Activities (See Appendix A)</li> <li>• Company</li> <li>• Interface Type</li> <li>• Service Type (See Appendix A)</li> <li>• Geographic Scope</li> </ul>	<ul style="list-style-type: none"> <li>• Rejection Interval - None</li> <li>• Jeopardy Interval - None</li> <li>• Firm Order Confirmation Interval - None</li> <li>• Completion Notification Interval - None</li> <li>• % Jeopardies - None</li> <li>• Completions or Attempts Without Notice or With less than 24-hours' notice delivery that the CLEC specifically requested.</li> </ul>
<b>Data Retained Relating To CLEC Experience:</b>	<b>Data Retained Relating To ILEC Performance:</b>
<ul style="list-style-type: none"> <li>• Report Month</li> <li>• Interface Type</li> <li>• Service Type</li> <li>• CLEC Order Number</li> <li>• Order Submission Date</li> <li>• Order Submission Time</li> <li>• Status Type (Rejection, FOC, Jeopardy Type, Completion Notice)</li> <li>• Status Notice Date</li> <li>• Status Notice Time</li> <li>• Standard Order Activity</li> <li>• Order Due Date</li> </ul>	<ul style="list-style-type: none"> <li>• Report Month</li> <li>• Interface Type</li> <li>• Service Type</li> <li>• Status Type (Rejection, FOC, Jeopardy Type, Completion Notice)</li> <li>• Average Status interval</li> <li>• Standard error of status interval</li> <li>• Number of Orders Reflected In Result</li> <li>• Standard Order Activity</li> <li>• Number of Statuses Provided</li> </ul>
<b>Performance Standard in Absence of ILEC Results</b>	<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:</p> <ul style="list-style-type: none"> <li>• no less than 97% of Rejects in any category for a reporting period are returned within 15 seconds</li> <li>• all Firm Order Confirmations are returned within 4 hours</li> <li>• no less than 97% of order completions in any category are returned within 30 minutes of work completion</li> <li>• 99.9% of completion and completion attempts should receive more than 24 hours notice.</li> <li>• no less than 97% of Jeopardies for any category are returned to the CLEC a minimum of 2 business days in advance of the due date indicated on the most recent FOC</li> <li>• no more than 5% of the total number of orders should result in a Jeopardy in any given report period.</li> </ul>

# Service Quality Measurements

## Measurement Detail

<b>Function: Business Implications:</b>	<p><b>Coordinated Cutovers</b></p> <p>Customers must not be subjected to unscheduled service disruptions because of lengthy or uncoordinated cutovers of loops with interim or permanent number portability or the provision of any other UNEs that require disconnection and reconnection of a customer.</p> <p>Customers may suffer loss of dialtone due to early cutovers (ILEC takes down loop before scheduled date for CLEC loop to be ready) in cases where interim number portability is involved. With Permanent Number Portability (PNP), customers may not receive inbound calls if the ILEC (1) does not provide timely disconnection of the ILEC's old translations for routing the number or (2) does not employ or prematurely takes down the 10-digit trigger designed to ensure proper routing during the transition. Service may also be disrupted in conversions from ILNP-to-PNP or through premature disconnects in coordinated cutovers of UNE combinations. The percentage of early and late cutovers must be monitored to ensure that CLECs' customers are not disproportionately losing dialtone or having inbound calling blocked.</p>
<b>Measurement Methodology:</b>	<p><b>Average Coordinated Conversion Interval = <math>\Sigma[(\text{Date \&amp; Time Re-termination is Completed by ILEC}) - (\text{Date \&amp; Time of Initial Service Interruption (disconnect for Customer Transferring Service)})] / (\text{Count of Completed Coordinated Conversions in Reporting Period})</math></b></p> <p><b>% Service Loss from Early Cuts = <math>(\text{Customer Conversion Where Cutover Time is Earlier Than Due Date and Time}) / (\text{All Customer Conversions Completed During Reporting Period}) \times 100</math></b></p> <p><b>% Service Loss from Late Cuts = <math>(\text{Customer Conversions Where Cutover Time is More than 30 Minutes Past Due Date and Time}) / (\text{All Customer Conversions Completed During Reporting Period}) \times 100</math></b></p> <p><b>For CLEC Results:</b></p> <p><b>Average Coordinated Conversion Interval:</b> The elapsed time between the disconnection of an access line (for a retail customer of the ILEC) from the switch port of the ILEC to the time that the ILEC finishes both the physical work necessary to re-terminate the loop (at the point of re-termination specified by the CLEC) and receives CLEC confirmation that electrical continuity exists. The elapsed time is accumulated for the reporting period and divided by the number of loops that were re-terminated on a coordinated basis.</p> <p><b>% Service Loss (Early/Late Cuts):</b> For hot loop cuts, the same loop is moved from an existing port to what is effectively a different port (The CLEC collocation point). Translation disconnections also are reported if they occur too early or late in a conversion involving local number portability. For each conversion, the ILEC will track whether the cutover time (for facilities and translations) was earlier or later than the committed due date and time that appeared on the FOC. The total number of early cutovers will be divided by the total number of customer conversions that were completed during the reporting period. Likewise, the total number of cutovers that were completed more than 30 minutes past the committed due date and time will be divided by the total number of customer conversions that were completed during the reporting period. For both formulas, the resulting ratio will be expressed as a percentage.</p>

# Service Quality Measurements

## Measurement Detail

<p><b>For ILEC Results:</b> ILECs would use retail residential or business POTS outside move activity as an analog. An outside move occurs when a customer, with existing service, moves from one premises to another within the same central office area without disconnecting and reconnecting service. With inside moves the customer keeps their own phone number. Although an outside move involves disconnecting an existing loop from an operating port and reconnecting a different loop (within the same office) to that same port, the work involved is very similar (i.e. coordinated re-termination).</p>	
<b>Reporting Dimensions:</b>	<b>Excluded Situations:</b>
<ul style="list-style-type: none"> <li>• Company</li> <li>• Type of Loop or UNE Combination Cutover and Type of NP involved (i.e. ILNP, PNP or ILNP-to-PNP conversion). See also Service Type (Appendix A)</li> <li>• Order Activity</li> <li>• Geography</li> <li>• Volume Category</li> </ul>	None
<b>Data Retained Relating To CLEC Experience:</b>	<b>Data Retained Relating To ILEC Experience:</b>
<ul style="list-style-type: none"> <li>• Report Month</li> <li>• Service Type</li> <li>• Order Activity</li> <li>• Committed Due Date and Time (from Firm Order Confirmation)</li> <li>• Completion Date and Time</li> <li>• Geographic Scope</li> <li>• Volume Category</li> </ul>	<ul style="list-style-type: none"> <li>• Report Month</li> <li>• Number of Early Conversions</li> <li>• Number of Conversions &gt;30 Minutes Late</li> <li>• Total Number of Conversions</li> <li>• Average Conversion Interval</li> <li>• Standard Error of Conversion Interval</li> <li>• Geographic Scope</li> <li>• Volume Category</li> </ul>
<b>Performance Standard in Absence of ILEC Results:</b>	<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:</p> <ul style="list-style-type: none"> <li>• 98% of coordinated cutovers have ILEC and CLEC work completed within 5 minutes of one another and 100% within 15 minutes.</li> <li>• 98% of unscheduled disruptions causing loss of dialtone or inbound call blocking should be corrected in 1 hour and 100% within 2 hours.</li> </ul>

<b>Function:</b>	<b>Held Orders</b>
<b>Business Implications:</b>	Customers expect that work will be completed when promised. Therefore, when delays occur in completing CLEC orders, such delays must be no longer than the average period of time the ILEC's own customer orders are held.
<b>Measurement Methodology:</b>	<p><b>Held Order Interval</b> = <math>\Sigma(\text{Reporting Period Close Date} - \text{Committed Order Due Date}) / (\text{Number of Orders Pending and Past The Committed Due Date})</math> for all orders pending and past the committed due date</p> <p><b>For CLEC Results:</b> This metric is computed at the close of each report period. The held order interval is established by first identifying all pending orders at that time</p>

# Service Quality Measurements

## Measurement Detail

that (1) have not been reported "completed" via a valid completion notice and (2) have passed the currently "committed completion date." For each such order, the number of calendar days between the committed completion date and the close of the reporting period is established and represents the held order interval for that particular order. The held order interval is accumulated (by service type and reason for the hold, if identified) and then divided by the number of held orders within the same category to produce the mean held order interval.

**Orders Held for  $\geq 90$  days** = (# of Orders Held for  $\geq 90$  days) / (Total # of Orders Pending But Not Completed) x 100

**Orders Held for  $\geq 15$  days** = (# of Orders Held for  $\geq 15$  days) / (Total # of Orders Pending But Not Completed) x 100

This "percentage orders held" measure is complementary to the held order interval but is designed to detect orders continuing in a "non-completed" state for an extended period of time. Computation of this metric uses a subset of the data accumulated for the "held order interval" measure. All orders, for which the "held order interval" equals or exceeds 90 (or 15) days, are counted by service type and reason for the hold. The total number of pending and past due orders for the same category are counted (as was done for the held order interval) and divided into the count of orders held past 90 (or 15) days.

**For ILEC Results:** Same computation as for the CLEC with the clarifications provided below..

### Other Clarifications and Qualification:

- The "held order" measure established by some state commissions as part of minimum service standards is analogous to this proposed measure but, because it is typically limited to monitoring only those orders held because of facility shortages, needs to be expanded to include all reasons that an order is pending and past due.
- **Order Supplements** - If the CLEC initiates a supplement to the originally submitted order for the purpose of reflecting changes in customer requirements, then the due date returned on the FOC will be the basis for the preceding calculations. No other supplemental order activities will result in an update to the committed due date.
- See "Order Status" measurement definitions for discussion of the ILEC analog for a completion notice.
- The held order interval is measured in calendar rather than business days.

### Reporting Dimensions:

- Company
- Service Type (See Appendix A)
- Reason for Hold (no facilities, no equipment, workload, other)
- Geographic Scope

### Excluded Situations

- Any orders canceled by the CLEC will be excluded from this measurement.
- Order Activities of the ILEC associated with internal or administrative use of local services

## Service Quality Measurements

### Measurement Detail

Data Retained Relating To CLEC Experience:		Data Retained Relating To ILEC Performance:	
<ul style="list-style-type: none"> <li>• Report Month</li> <li>• CLEC Order Number</li> <li>• Committed Due Date</li> <li>• Report Period Close</li> <li>• Service Type</li> <li>• Hold Reason</li> <li>• Geographic Scope</li> </ul>		<ul style="list-style-type: none"> <li>• Report Month</li> <li>• Average Held Order Interval</li> <li>• Standard Error for Average Held Order. Interval</li> <li>• Number of Orders Rejected</li> <li>• Service Type</li> <li>• Hold Reason</li> <li>• Geographic Scope</li> </ul>	
<b>Performance Standard in Absence of ILEC Results:</b>		<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:</p> <ul style="list-style-type: none"> <li>• Less than 0.1% of orders held for more than 15 calendar days.</li> <li>• No orders held for more than 90 calendar days.</li> </ul>	

# Service Quality Measurements

## Measurement Detail

### Maintenance and Repair (MR)

<b>Function:</b> <b>Business Implications:</b>	<b>Time To Restore</b> <p>Customers expect service to be restored promptly to the normal operating parameters whenever troubles are detected. The longer the time required to correct a service problem, the greater the customer dissatisfaction. Customers also need to know that the CLEC is monitoring the status of their repair closely. The CLEC, therefore, needs jeopardy notification if repair commitments are not going to be met. Both measures, when collected and compared for the CLEC and ILEC, monitor whether the CLEC receives the same intervals and jeopardy notices regarding repairs as the ILEC provides for its own or an affiliate's retail customers.</p>
<b>Measurement Methodology:</b>	<p><b>Mean Time To Restore</b> = <math>\Sigma[(\text{Date and Time of Trouble Ticket Resolution Returned to CLEC}) - (\text{Date and Time of Trouble Ticket Referred to the ILEC})] / (\text{Count of Trouble Tickets Resolved in Reporting Period})</math></p> <p><b>For CLEC Results:</b> The restoral interval for resolution of customer requested maintenance and repair is the elapsed time, measured in hours and tenths of hours, measured from the CLEC submission of a customer trouble to the ILEC, regardless of the ultimate resolution of the trouble, to the time the ILEC returns a valid trouble resolution notification to the CLEC. The elapsed time is accumulated by service type and trouble disposition for the reporting period. The accumulated time is divided by the count of maintenance tickets reported as resolved by the ILEC (by service type and trouble type) during the report period.</p> <p><b>For ILEC Results:</b> Same computation as for the CLEC.</p> <p><b>Other Clarifications and Qualification:</b></p> <ul style="list-style-type: none"> <li>• Elapsed time is measured on a 24-hour-a-day, seven-days-a-week basis. The time is measured in hours and hundredths of hours rounded to the nearest hundredth hour.</li> <li>• Multiple reports for the same customer service are treated as the same incident only when a subsequent report is received for a customer service arrangement that already has an open ticket.</li> <li>• "Restore" means to return to the normally expected operating parameters for the service regardless of whether or not the service, at the time of trouble ticket creation, was operating in a degraded mode or was completely unusable.</li> <li>• A trouble is "resolved" when the ILEC issues notice to the CLEC that the customer's service is restored to normal operating parameters.</li> <li>• A trouble ticket or trouble report is any record (whether paper or electronic) used by the ILEC for the purpose of monitoring action and disposition of a service repair or maintenance situation.</li> <li>• ILEC acceptance of a trouble by the call receipt agent is considered equivalent to the CLEC logging or submitting a trouble to the ILEC.</li> <li>• The ILEC closure of a trouble ticket (whether automatic or manual) is considered equivalent to returning a trouble resolution notice to the CLEC.</li> </ul> <p><b>Mean Jeopardy Interval</b> = <math>\Sigma [(\text{Date and Time of Committed Due Date for the Order}) - (\text{Date and Time of Jeopardy Notice})] / (\text{Number of Orders Jeopardized in Reporting Period})</math></p>



# Service Quality Measurements

## Measurement Detail

**CLEC Results: Jeopardy Interval** is the remaining time between the pre-existing committed maintenance or trouble handing appointment date and time and the date and time the ILEC issues a notice to the CLEC indicating an appointment is in jeopardy of being missed. The scheduled appointment time will be assumed to be 5:00 p.m. local time unless other information is communicated. The date and time of the jeopardy notice delivered by the ILEC is subtracted from the scheduled completion date to establish the jeopardy interval for any appointment placed in jeopardy. The jeopardy interval is accumulated by service group with the resulting accumulated time then divided by the count of scheduled appointments associated with the particular service.

**For ILEC Results:** Computations are the same as for the CLEC with the clarifications outlined below.

### Other Clarifications and Qualification:

All intervals are measured in hours and hundredths of an hour rounded to the nearest hundredth. The lack of electronic bonding for maintenance does not excuse the ILEC from jeopardy reporting requirements.

### Reporting Dimensions:

- Service Type (See Appendix A)
- Trouble Type
- Geographic Scope

### Excluded Situations:

- Trouble tickets that are canceled at the CLEC's request
- ILEC trouble reports associated with administrative service
- Instances where the CLEC or an ILEC customer requests that a ticket be "held open" for monitoring
- Subsequent Reports (additional reports on an already open ticket)
- Any trouble type tracking that parties agree are technically unfeasible or operationally prohibitive
- A trouble ticket created for tracking and/or monitoring requests for clarifying information (e.g. confirmation of customer ownership from CLEC support centers.
- Tickets used to track referrals of misdirected calls